

A NEW SPECIES AND SOME NEW RECORDS FROM EAST ANATOLIA

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ABSTRACT. *Ranunculus bingöeldaghensis* A. Engin (Ranunculaceae) is described as a new species and a list of 66 new records of flowering plants from the E Anatolian Province of Bingöl is given.

Ranunculus bingöeldaghensis A. Engin, sp. nov. Fig. 1 & 2.

R. sintenisii Freyn affinis sed petiolis brevioribus (4-5cm longis), segmento mediano foliorum radicalium minore (1.5-2.5cm x 3-4mm), achenis longioribus (3.5-5mm longis) semiorbicularibus tuberculatis rostris uncinatis et in aestate (Jun.-Jul.) non in vere florifero bene distinguitur.

Herba perennis, glabra parte superiore excepta, 8-13cm alta. Radices dimorphae, tubera radicum brevia, fusiformia, cylindrica, 10-25 x 1-2mm, radices fibrosae numerosae, 20-50mm longae. Caulis fistulosus, teretus, 1-2mm diam., in partem superiorem pilosus, 1-2-ramosi, 1-2-flori. Folia radicalia 3-5cm, heteromorpha, palmata vel bipartita vel tripartita, in statu tripartito segmentis exterioribus 1-15 x 1-2mm, lanceolatis, acutis vel obtusis, mediano quam alteris longiore, 5-20 x 2-4mm, lanceolato, obtuso vel acuto, vagina hyalina grisea quam petiolum 3-plo brevior. Pedunculus fistulosus, teretus, glabrescens, 0.8-1mm crassus. Sepala 5, recurvata, interdum patentia, 3-6 x 1-3mm, viridia vel sordide lutea, oblonga vel elliptica, integra, obtusa, 3-nervata. Petala 5, lutea vel albido-lutea, 10-15 x 4-5mm, oblanceolata ad elliptica, obtusa, interdum oblonga vel rotundata, trinervia. Torus glaber, paulo tumidus. Gynoecium quam petala brevius. Infructescencia oblongo-cylindrica, 9-12 x 4-5mm. Achenia numerosa, spiraler disposita, exalata, semiorbicularia vel ovata, paulo compressa, tuberculata, hispidulosa, 3.5-5mm, rostram rectam uncinatam inclusa. *Fl. Jun.-Jul. In montibus.*

Perennial herb, glabrous except above, 8-13cm. Roots dimorphic, root-tubers short, fusiform and cylindrical, 10-25 x c. 1-2mm, fibrous roots numerous, 20-50mm. Stem fistulose, terete, pilose above, c. 1-2mm thick, 1-2-branched and 1-2-flowered. Radical leaves 3-5cm long, heteromorphic, palmate to bipartite or tripartite, in the tripartite condition outer segments 1-15 x 1-2mm, lanceolate, acute or obtuse, central longer than others, 5-20 x 2-4mm, lanceolate, obtuse or acute, sheath transparent and grey-coloured, one third as long as petiole. Peduncle fistulose, terete, glabrescent, 0.8-1mm thick. Sepals 5, recurved, sometimes spreading, 3-6 x 1-3mm, green or dirty yellow, oblong or elliptic, entire, obtuse, 3-nerved. Petals 5, yellow or whitish yellow, 10-15 x 4-5mm, oblanceolate to elliptic, obtuse sometimes oblong or rounded, 3-nerved. Torus glabrous and slightly swollen. Gynoecium shorter than petals. Fruiting head oblong-cylindrical, 9-12 x 4-5mm. Achenes numerous, spirally arranged, wingless, semiorbicular to ovate, slightly compressed, tuberculate, hispidulose, 3.5-5mm including a nearly straight uncinat beak. *Fl. 6-7. Mountains.* TYPE. Turkey B8 Bingöl, Hınıs to Ortaköy Yayla, moist and wet pastures, 2600m, 7vi 1980, Engin 0216(holo. herb Ali Engin; iso. ATA, E).

The following plants, collected by the author in the eastern Turkish province of Bingöl (B8), during 1979 and 1980, are new for the grid square

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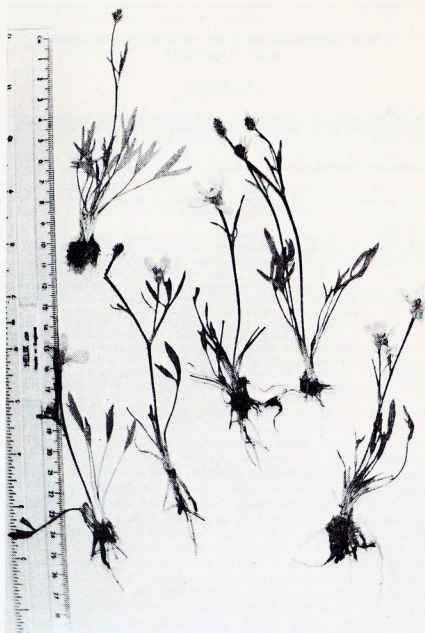


FIG. 1. *Ranunculus bingoeldaghensis*, Engin 0216, holotype.

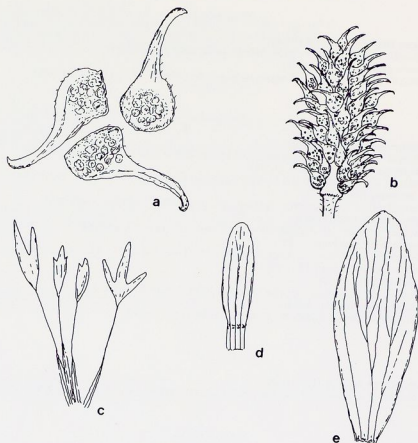


FIG. 2. *Ranunculus bingoeldaghensis*. a, achenes; b, fruiting receptacle; c, radical leaves; d, sepal; e, petal. a, d & e \times approx. 7, b \times approx. 2, c \times approx. 0.7.

as assessed by reference to the *Flora of Turkey and the East Aegean Islands* Vol. 1-7 as well as recent publications containing new floristic records.

The numbers in square brackets refer to volume and page number in the *Flora of Turkey*. All the specimens cited are kept in the herbaria in Atatürk Üniversitesi, Erzurum (ATA) and duplicates of most are also deposited at Royal Botanic Garden, Edinburgh (E).

I am indebted to Dr R. R. Mill for help with the Latin description and to Prof. P. H. Davis, Dr Kit Tan, I. C. Hedge and his colleagues on the herbarium staff at Edinburgh for checking the identifications presented here.

RANUNCULACEAE

Ranunculus grandiflorus L. [1:168]

B8 Bingöl: Karlioğa, above Menkel, pasture, 2200-2300m, 19 v 1979, *Engin* 0019.

Aquilegia olympica Boiss. [1:199]

B8 Bingöl: Hınıs to Meydan, Hınıs çayı De, wet places, 2000m, 10 vii 1980, *Engin* 1303.

Thalictrum minus L. var. *minus* [1:201]

B8 Bingöl: Kirikhan, around Meydan, canal banks, 2400m, 15 vii 1980, *Engin* 0499.

PAPAVERACEAE

Papaver lateritium C. Koch [I:226]

B8 Bingöl: Hınıs, Korsan Y., 2400–2500m, 16 vii 1980, *Engin* 0541.

Fumaria parviflora Lam. [I:247]

B8 Bingöl: around Kirikhan, N slopes of Bingöl Da., 2300m, 16 vii 1980, *Engin* 0818

CRUCIFERAE

Lepidium vesicarium L. [I:282]

B8 Bingöl: Hınıs, around Yamanlar, stony places, 2000m, 15 vii 1980, *Engin* 0722.

Aethionema caespitosum Boiss. [I:324]

B8 Bingöl: Kirikhan to Meydan, N slopes of Bingöl Da., 2600m, 27 vii 1980, *Engin* 0890.

Ae. armenum Boiss [I:327]

B8 Bingöl: Hınıs above Ortaköy, subalpine pasture, 2200m, 7 vi 1980, *Engin* 0168.

Draba rosularis Boiss. [I:417]

B8 Bingöl: Kirikhan, around Hamzalar Y., 2800m, 27 vii 1980, *Engin* 0895.

Hesperis breviscapa Boiss. [I:453]

B8 Bingöl: Hınıs to Meydan, roadside, 2100m, 15 v 1980, *Engin* 0764. Only known at present from the type gathering B7 Erzincan.

He. persica Boiss. [I:458]

B8 Bingöl: Hınıs, around Yamanlar, steppe, 2100m, 9 vi 1980, *Engin* 0430.

Sisymbrium orientale L. [I:483]

B8 Bingöl: Karlıova, Hemran Y., 2220m, 17 vi 1981, *Engin* 0944.

VIOLACEAE

Viola dichroa Boiss. & Huet [I:529]

B8 Bingöl: Hınıs, Korsan Y., alpine meadows, 2800–3000m, 16 vii 1980, *Engin* 0567.

POLYGALACEAE

Polygala major L. [I:536]

B8 Bingöl: Varto, SE slope of Bingöl Da., steppe, 2300m, 16 vi 1980, *Engin* 0772.

CARYOPHYLLACEAE

Arenaria dianthoides Smith [II:32]

B8 Bingöl: Naceran, 2800m, 9 vii 1980, *Engin* 0673.

A. holostea M. Bieb. subsp. **macrantha** (Schischk.) McNeil [II:33]

B8 Bingöl: Naceran to Hınıs, 2500m, 11 vii 1980, *Engin* 0679.

Minuartia hirsuta (Bieb.) Hand-Mazz. subsp. **falcata** (Gris.) Mattf. [II:46]

B8 Bingöl: Gükoğlan, Çukuryayla Y., 2400m, 15 vii 1980, *Engin* 0472-a.

Stellaria holostea L. [II:71]

B8 Bingöl: Hınıs, Ünlüce Y., mountain pasture, 2500m, 8 vi 1980, *Engin* 0390-a.

Cerastium cerastioides (L.) Britt. & C. Koch. [II:75]

B8 Bingöl: Hınıs, Korsan Y., meadows, 2800m, 16 vii 1980, *Engin* 0577.

C. dahuricum Fisch. [II:76]

B8 Bingöl: Hınıs, Başköy, river banks, 2000m, 8 vi 1980, *Engin* 0351.

Dianthus anatolicus Boiss. [II:110]

B8 Bingöl: Hınıs, below Meydan köy, 2250m, 25 vi 1980, *Engin* 0765.

Silene viscosa (L.) Pers. [II:202]

B8 Bingöl: Hınıs, around Yamanlar, meadows, 2000–2100m, 21 vi 1980, *Engin* 0702.

S. otites L. [II:203]

B8 Bingöl: Hınıs, Karapınar to Geduk, 2100m, 15 vii 1980, *Engin* 0532.

S. dianthoides Pers. [II:211]

B8 Bingöl: Hınıs, Ortaköy to Yamanlar, 2000m, 21 vi 1980, *Engin* 0710.

S. alba (Miller) Krause subsp. **erioalycina** (Boiss.) Walters [II:226]

B8 Bingöl: Hınıs, SE slope of Bingöl Da., 1800m, 26 v 1979, *Engin* 0073.

POLYGONACEAE

Rheum ribes L. [II:268]

B8 Bingöl: Kirikhan, above Alimor, steppe, 2300–2400m, 27 vi 1980, *Engin* 1006.

Rumex scutatus L. [II:284]

B8 Bingöl: Kirikhan, around Tayyarkomu, 2300m, 3 vii 1980, *Engin* 1085

GUTTIFERAE

Hypericum organifolium Willd. [II:396]

B8 Bingöl: Hınıs, around Kizilan, river banks, moisture, 1800–2000m, 10 vii 1980, *Engin* 1303.

MALVACEAE

Lavatera thuringiaca L. [II:410]

B8 Bingöl: Varto to Çaylar, S slope of Bingöl Da., 2300m, 18 vii 1980, *Engin* 0754.

LINACEAE

Linum hypericifolium Salisb. [II:441]

B8 Bingöl: Hınıs, around Yamanlar, 2400–2500m, 15 vii 1980, *Engin* 0726.

GERANIACEAE

Erodium cicutarium (L.) L'Hérit. [II:485]

B8 Bingöl: around Çaylar, steppe, 2200m, 11 vii 1980, *Engin* 0664.

Pelargonium endlicherianum Fenzl [II:487]

B8 Bingöl: Hınıs to Meydan, stony places, 2400m, 9 vi 1980, *Engin* 0719.

LEGUMINOSAE

Astragalus pinetorum Boiss. [III:114]

B8 Bingöl: Kirikhan, Ünlüce Ya., steppe, 2800m, 8 vi 1980, *Engin* 0403.

A. taechius Woron. [III:244]

B8 Bingöl: S slope of Bingöl Da., Hınıs to Meydan, stony place, 1900–2000m, 15 vi 1981, *Engin* 1035.

Suffrutescent, caulescent perennial up to 45cm. Leaves 4–7cm; leaflets 5–10 (–13)mm.

ROSACEAE

Prunus divaricata Ledeb. [IV:10]

B8 Bingöl: Hınıs, S slope of Bingöl Da., 1800m, 17 vii 1980, *Engin* 0135.

Alchemilla compactilis Tuz. [IV:92]

B8 Bingöl: Hınıs to Meydan, 2700m, 10 vii 1980, *Engin* 0932.

CRASSULACEAE

Sedum tetramerum Trautv. [IV:240]

B8 Bingöl: Kirikhan, N slope of Bingöl Da., 2000m, 17 vi 1980, *Engin* 0952.

UMBELLIFERAE

Astrantia maxima Pallois [IV:290]

B8 Bingöl: Hınıs to Meydan, alpine pasture, 2500m, 15 vii 1980, *Engin* 0993.

Malabaila secacul (Banks) Sol. [IV:487]

B8 Bingöl: Hınıs, around Başköy, river banks, 2100–2200m, 8 vi 1980, *Engin* 0329.

VALERIANACEAE

Valerianella dufresiana Bunge & Boiss. [IV:574]

B8 Bingöl: Kirikhan to Hasansevi, N slope of Bingöl Da., 2500–2600m, 27 v 1980, *Engin* 0910.

COMPOSITAE

Aster alpinus L. [V:119]

B8 Bingöl: Hınıs, Naceran Y., alpine pasture, 2900m, 17 vii 1980, *Engin* 1200.

Bellis perennis L. [V:135]

B8 Bingöl: Hınıs, Naceran Y., alpine pasture, 3000m, 17 vii 1980, *Engin* 1201.

Doronicum oblongifolium DC. [V:145]

B8 Bingöl: Kirikhan, N slope of Bingöl Da., 2400m, 15 vii 1980, *Engin* 0485-a.

Asyneuma pulchellum (Fet. M.) Bornm. [VI:79]

B8 Bingöl: Karlıova to Çaylar, above Y., 2700m, 12 viii 1980, *Engin* 0553.

ERICACEAE

Pyrola chlorantha Swartz [VI:105]

B8 Bingöl: Kirikhan, N slope of Bingöl Da., wet places, 2000–2100m, 10 viii 1980, *Engin* 0801.

BORAGINACEAE

Solenanthus circinnatus Ledeb. [VI:303]

B8 Bingöl: Hınıs, Ünlüce Y., stony places, 2500m, 8 vi 1980, *Engin* 0401.

Buglossoides arvensis (L.) Johnston [VI:316]

B8 Bingöl: Hınıs, Ünlüce Y., dry places, 2500m, 8 vi 1980, *Engin* 0395.

SCROPHULARIACEAE

Scrophularia chrysantha Taub. & Spach [VI:609]

B8 Bingöl: Tekman to Kirikhan, around Meydan, 2600m, 10 viii 1980, *Engin* 1263.

S. lucida L. [VI:635]

B8 Bingöl: Kirikhan, around Tayyarkomu, stony places, 2200m, 17 vii 1980, *Engin* 0942.

Veronica bozakmanii M. A. Fischer [VI:707]

B8 Bingöl: around Hınıs, stony places, roadside, 2000m, 25 v 1979, *Engin* 0056.

Euphrasia yuzepeczukii Danissova [VI:762]

B8 Bingöl: Kirikhan, Meydan Y., alpine pasture, 2800m, 17 vii 1980, *Engin* 0625.

LABIATAE
(LAMIACEAE)

Stachys macrantha (C. Koch) Stearn [VII:260]

B8 Bingöl: Hınıs, Korsaň Y., meadows, 2500–2600m, 16 vii 1980, *Engin* 0605.

S. macrostachya (Wend.) Briq. [VII:261]

B8 Bingöl: Tekman to Kirikhan, meadows, 2400m, 15 vii 1980, *Engin* 0470.

Nepeta meyeri Benth. [VII:285]

B8 Bingöl: Varto, around Segren, 1700–1800m, 20 vi 1980, *Engin* 1277.

Origanum rotundifolium Boiss. [VII:303]

B8 Bingöl: Hınıs to Meydan, roadside, 2100m, 10 vii 1980, *Engin* 1278.

Calamintha grandiflora (L.) Moench [VII:324]

B8 Bingöl: Hınıs to Meydan, meadows, 2200m, 10 vii 1980, *Engin* 1279.

Ziziphora persica Bunge [VII:398]

B8 Bingöl: Varto to Hınıs, Karapınar Y., steppe, 2300m, 15 vii 1980, *Engin* 0527.

Z. tenuior L. [VII:399]

B8 Bingöl: Varto to Çaylar, Semen Y., 2300–2400m, 17 vii 1979, *Engin* 0831.

Salvia huberi Hedge [VII:420]

B8 Bingöl: Hınıs to Meydan, meadow, 2100m, 15 vi 1980, *Engin* 0959.

EUPHORBIACEAE

Euphorbia myrsinites L. [VII:612]

B8 Bingöl: Karlıova to Çat, NW slope of Bingöl Da., around Hemran, 2300m, 29 vii 1980, *Engin* 0034.

E. cheiradenia Boiss. & Hohen. [VII:619]

B8 Bingöl: Hınıs, Korsan to Ünlüce Y., steppe, 2500m, 8 viii 1980, *Engin* 0427.

URTICACEAE

Parietaria judaica L. [VII:636]

B8 Bingöl: Kirikhan around Tayyarkomu, stony places, 2100m, 8 vii 1980, *Engin* 1290.

RUBIACEAE

Asperula taurina L. subsp. *caucasica* (Pobed.) Ehrend. [VII:758]

B8 Bingöl: Hınıs to Meydan, river banks, 2400m, 8 vi 1980, *Engin* 1299.

Callipeltis cucullaria (L.) Steven [VII:850]

B8 Bingöl: Hınıs, above Başköy, 2050m, 7 vi 1980, *Engin* 0262.